AMIGOS DEL MSX

295 PTS.

N.º 12 AÑO II

DRAW EDITOR
LA RANA LOCA
AJUSTE A UNA RECTA
TRUCO 3
TENIS
BASE 7
LA GRUTA

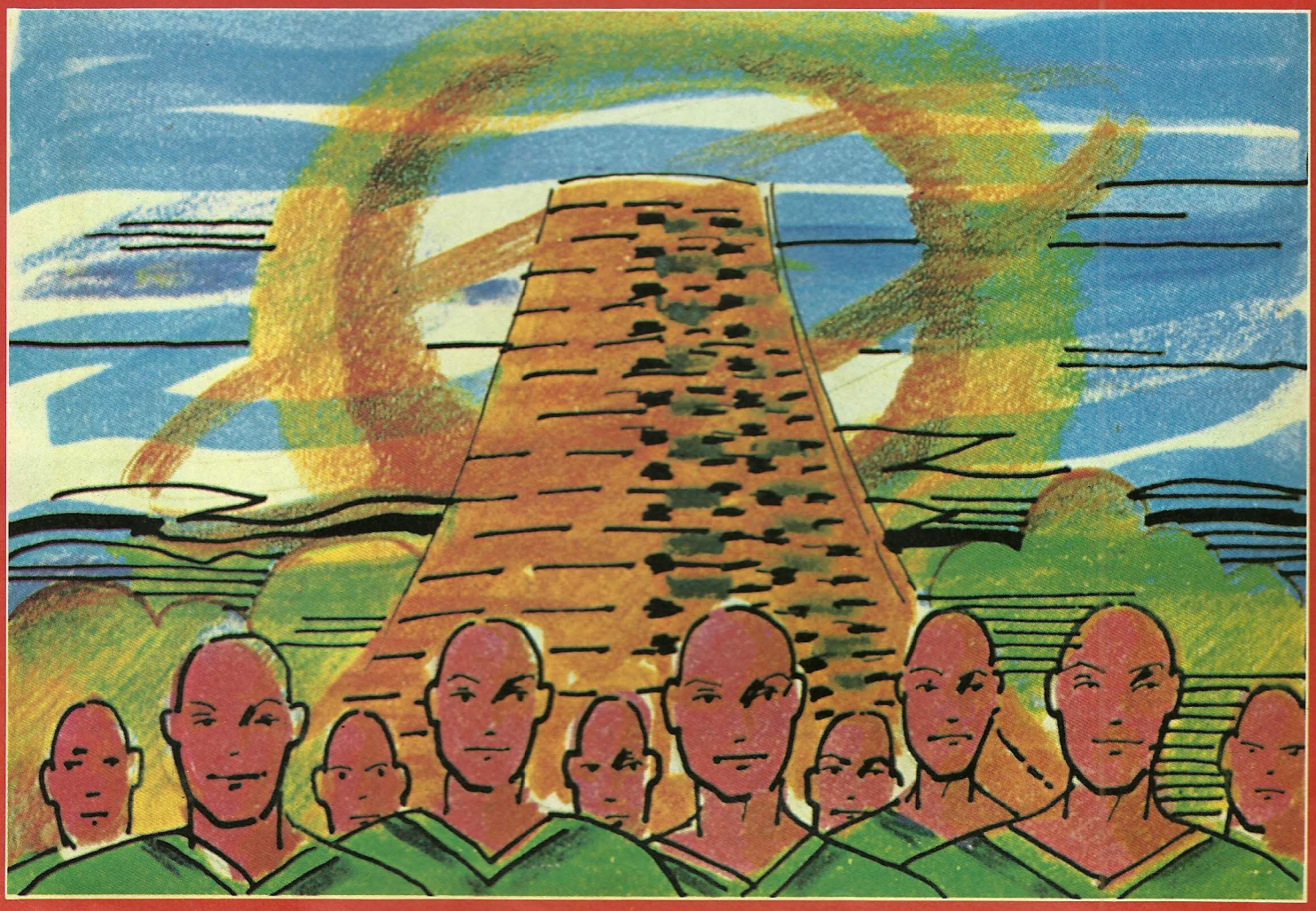
TODO SOBRE EL

AMSTRAD

N.º 17 690 Ptas.

LOS MEJORES PROGRAMAS COMERCIALES MADE IN TAIWAN

PLUTON



AMIGOS DEL MSX

SUMARIO

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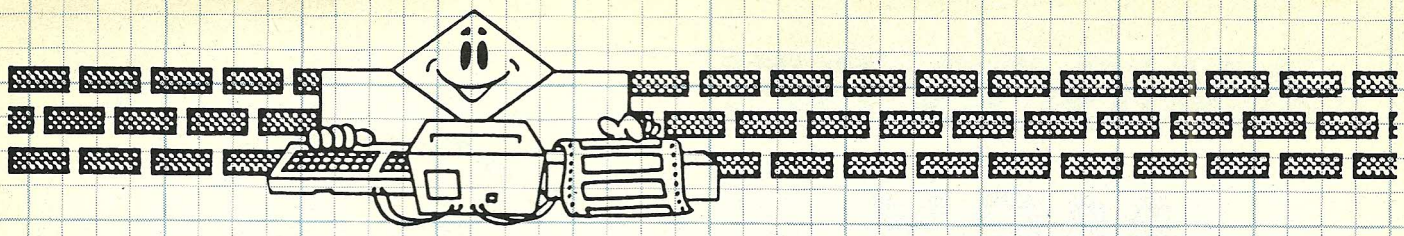


DRAW EDITOR

```
10 REM ******************************
20 REM *                            *
30 REM *     MSX - DRAW EDITOR      *
40 REM *                            *
50 REM ******************************
60 REM
70 REM *       INICIALIZACION       *
80 REM *       Y PRESENTACION       *
90 REM
100 CLEAR 2000:MAXFILES=2
110 COLOR 8,1,1:SCREEN 2
120 LINE(56,32)-(199,159),,B
130 LINE(57,33)-(198,158),,B
140 PSET(85,93)
150 DRAW"M93,60M99,60M102,73M103,73M106,60M112,60M118,85BM120,93M
113,93M110,80M109,80M106,93M99,93M96,80M95,80M92,93M85,93BM121,93
M135,93"
160 CIRCLE(135,83),10,,4.712,1.571
170 PSET(134,73)
180  DRAW"M126,73M125,72M124,71M124,70M125,69M126,68M148,68BM152,
60M128,60":CIRCLE(128,70),10,,1.571,4.713
190 PSET(129,80)
200  DRAW"M137,80M138,81M139,82M139,83M137,85M118,85BM152,60M157,
70M162,60M170,60M162,76M170,93M162,93M157,83M152,93M144,93M152,76
M148,68"
210 PAINT(130,65):PRESET(85,110)
```

```
220 OPEN"GRP:"AS#1
230 PRINT#1,"DRAW EDITOR"
240 PRESET(85,140)
250 'RAW"C8R50U7R4F1D2G1L3BD3BR1U9R4F1D2G1L3BD3BR1D2R2U2R2BG2R4U2
D2R2U2R2D2R2U2BU2LOBL6LOBR11BD1E1D4L5R7R2U4L2D2R1BR3R2D2L3R1U4R2D
4R2R2U2L2U2R2"
260 FORK=0TO2000:NEXTK
270 DIM DM$(44):FOR N=1 TO 44
280 READ DM$(N):NEXT N
290 COLOR 1,8,8:SCREEN 2
300 DRAW"C1BM7,0R242"
310 FOR N=6 TO 174 STEP 8:COLOR 15
320 DM=DM+1:IF N=166 THEN PRESET(19,158):PRINT#1,"BS"
330 IF N<40 OR N>105 THEN PRESET(7,N):PRINT#1,DM$(DM):COLOR 1:PRE
SET(52,N):PRINT#1,DM$(DM+22) ELSE PRESET(52,N):DRAW"C11":DRAW DM$
(DM):COLOR 11:PRESET(64,N):PRINT#1,DM$(DM+22)
340 NEXTN:DRAW"C1BM7,187R52BR137R52"
350 COLOR 15:PRESET(66,184)
360 PRINT#1,"(PULSA UNA TECLA)"
370 IF INKEY$<>""THEN 370
380 IF INKEY$="" THEN 380
390 DEFINT A-Z:CP=15:CS=12:CB=1
400 COLOR CP,CS,CB:SCREEN 2,2
410 SPRITE$(1)=CHR$(0)+CHR$(0)+CHR$(0)+CHR$(0)+CHR$(127)+CHR$(0)+
CHR$(0)+CHR$(0)
420 SPRITE$(2)=CHR$(0)+CHR$(127)+CHR$(65)+CHR$(65)+CHR$(65)+CHR$(
65)+CHR$(127)+CHR$(0)
430 SPRITE$(3)=CHR$(28)+CHR$(34)+CHR$(65)+CHR$(65)+CHR$(65)+CHR$(
65)+CHR$(34)+CHR$(28)
440 SPRITE$(4)=CHR$(224)+CHR$(240)+CHR$(240)+CHR$(120)+CHR$(20)+C
HR$(10)+CHR$(5)+CHR$(3)
450 SPRITE$(5)=CHR$(8)+CHR$(30)+CHR$(40)+CHR$(28)+CHR$(10)+CHR$(6
0)+CHR$(8)+CHR$(0)
460 SPRITE$(6)=CHR$(28)+CHR$(34)+CHR$(32)+CHR$(28)+CHR$(2)+CHR$(3
4)+CHR$(28)+CHR$(0)
470 SPRITE$(7)=CHR$(32)+CHR$(32)+CHR$(32)+CHR$(32)+CHR$(32)+CHR$(
32)+CHR$(62)+CHR$(0)
480 SPRITE$(8)=CHR$(65)+CHR$(99)+CHR$(54)+CHR$(28)+CHR$(28)+CHR$(
54)+CHR$(99)+CHR$(65)
490 SPRITE$(9)=CHR$(170)+CHR$(84)+CHR$(170)+CHR$(84)+CHR$(170)+CH
R$(84)+CHR$(170)+CHR$(0)
500 A$=CHR$(255)+CHR$(255)+CHR$(255)+CHR$(0)+CHR$(0)+CHR$(0)+CHR$
(0)+CHR$(0)
510 B$=CHR$(0)+CHR$(0)+CHR$(0)+CHR$(0)+CHR$(0)+CHR$(255)+CHR$(255
)+CHR$(255)
520 C$=CHR$(254)+CHR$(254)+CHR$(254)+CHR$(0)+CHR$(0)+CHR$(0)+CHR$
(0)+CHR$(0)
530 D$=CHR$(0)+CHR$(0)+CHR$(0)+CHR$(0)+CHR$(0)+CHR$(254)+CHR$(254
)+CHR$(254)
540 SPRITE$(10)=A$+B$+C$+D$
550 A$=CHR$(0)+CHR$(0)+CHR$(0)+CHR$(255)+CHR$(255)+CHR$(255)+CHR$
(255)+CHR$(255)
560 B$=CHR$(255)+CHR$(255)+CHR$(255)+CHR$(255)+CHR$(255)+CHR$(0)+
CHR$(0)+CHR$(0)
570 C$=CHR$(0)+CHR$(0)+CHR$(0)+CHR$(254)+CHR$(254)+CHR$(254)+CHR$
(254)+CHR$(254)
580 D$=CHR$(254)+CHR$(254)+CHR$(254)+CHR$(254)+CHR$(254)+CHR$(0)+
```

```
CHR$(0)+CHR$(0)
590 SPRITE$(11)=A$+B$+C$+D$
600 SPRITE$(12)=CHR$(0)+CHR$(16)+CHR$(0)+CHR$(0)+CHR$(0)+CHR$(0)+
CHR$(0)+CHR$(0)
610 SPRITE$(13)=CHR$(16)+CHR$(40)+CHR$(16)+CHR$(0)+CHR$(0)+CHR$(0
)+CHR$(0)+CHR$(0)
620 A$=CHR$(0)+CHR$(115)+CHR$(34)+CHR$(34)+CHR$(34)+CHR$(35)+CHR$
(0)+CHR$(0)
630 B$=CHR$(0)+CHR$(0)+CHR$(0)+CHR$(0)+CHR$(0)+CHR$(0)+CHR$(0)+CH
R$(0)
640 C$=CHR$(0)+CHR$(156)+CHR$(148)+CHR$(156)+CHR$(144)+CHR$(144)+
CHR$(0)+CHR$(0):D$=B$
650 SPRITE$(14)=A$+B$+C$+D$
660 A$=CHR$(255)+CHR$(255)+CHR$(255)+CHR$(255)+CHR$(255)+CHR$(255
)+CHR$(255)+CHR$(0)
670 C$=CHR$(254)+CHR$(254)+CHR$(254)+CHR$(254)+CHR$(254)+CHR$(254
)+CHR$(254)+CHR$(0)
680 SPRITE$(15)=A$+B$+C$+D$
690 ERASE DM$:GOSUB 3350
700 REM
710 REM *                                *
720 REM *    ACTIVACION  COMANDOS   *
730 REM *                                *
740 REM
750 ON STRIG GOSUB 2100
760 ON KEY GOSUB 2170,2300,2320,2340,2360:S1=1:S2=2
770 STRIG(0)ON:KEY(1)ON
780 'ON STOP GOSUB 1490:STOP ON
790 IF F5>0 AND DR(S)=5 THEN 980
800 K$=INKEY$:D=STICK(0)
810 IFP=3ORP=4THENXS=-10:GOTO 960
820 IFD=1THENY=Y-I
830 IFD=2THENX=X+I:Y=Y-I
840 IFD=3THENX=X+I
850 IFD=4THENX=X+I:Y=Y+I
860 IFD=5THENY=Y+I
870 IFD=6THENX=X-I:Y=Y+I
880 IFD=7THENX=X-I
890 IFD=8THENX=X-I:Y=Y-I
900 IFX<0THENX=0
910 IFX>255THENX=255
920 IFY<0THENY=0
930 IFY>191THENY=191
940 IF F5>0 AND DR(S)>3 THEN 980
950 XS=X-3:YS=Y-2
960 PUT SPRITE 4,(XS,YS),15,12
970 PUT SPRITE 5,(XS,YS),1,13
980 IFK$=CHR$(13)THEN P=1
990 IFK$=CHR$(8)THEN P=2
1000 IFK$=CHR$(18)THEN P=3:S=S+1
1010 IFK$=CHR$(127)THEN P=4:S=S-1
1020 IFK$=CHR$(24)THEN P=5
1030 IFK$=CHR$(9)THEN GOSUB 1700
1040 IFK$=CHR$(11)THEN GOSUB 2470
1050 ON P GOSUB 1140,1260,1420,1430,1560
1060 ON FF GOTO 1060
1070 GOTO 790
```

```
1080 YS=-10:RETURN 960
1090 REM
1100 REM *                                *
1110 REM *    SUB. DISEÑO FIGURA          *
1120 REM *                                *
1130 REM
1140 IF F5=0 OR S<>R THEN 1190 ELSE XB(R)=X:YB(R)=Y:CO(R)=CP:DR(R
)=FD:DR$(R)=CH$:CD=CP:S=R
1150 IF FD=4 AND FR=1 THEN PRESET(XA(R),YA(R))
1160 GOSUB 1800:R=R+1:CO(R)=CP:DR(R)=FD:CH$=""
1170 IF FD=3 THEN XA(R)=XA(S):YA(R)=YA(S):FR=1 ELSE XA(R)=X:YA(R)
=Y:FR=0
1180 IF FD=5 THEN PSET(X,Y):STRIG(0)ON:FR=1
1190 P=0:F5=0:S=R:RETURN
1200 REM
1210 REM *                                *
1220 REM *     SUB.CANCELACION            *
1230 REM *          FIGURA                *
1240 REM *                                *
1250 REM
1260 IF FD=5 THEN X=XA(R):Y=YA(R):PSET(X,Y),CO(S):STRIG(0)ON:FR=1
1270 IF R=S THEN 1350
1280 IF DR(S)=4 THEN FP=1:FR=1
1290 CD=CS:GOSUB 1800
1300 FOR N=S TO R-1
1310 XA(N)=XA(N+1):YA(N)=YA(N+1):XB(N)=XB(N+1):YB(N)=YB(N+1):CO(N
)=CO(N+1):DR(N)=DR(N+1):DR$(N)=DR$(N+1)
1320 NEXT N:R=R-1
1330 IF FP=1 THEN FP=0:GOSUB 2470
1340 IF R=S AND FR=0 THEN PSET(XA(R),YA(R)):FR=1
1350 P=0:F5=0:CH$="":RETURN
1360 REM
1370 REM *                                *
1380 REM *  SUB. PARPADEO  FIGURA         *
1390 REM *  PRECEDENTE/SIGUIENTE          *
1400 REM *                                *
1410 REM
1420 IF S>R-1 THEN S=R-1
1430 IF S<0 THEN S=0
1440 IF R=0 THEN RETURN
1450 IF DR(S)=4 THEN F5=1 ELSE F5=0
1460 CD=CS:GOSUB 1800
1470 FOR K=0 TO 50:NEXT K:IF FD=5 THEN X=XA(R):Y=YA(R):CH$=""
1480 CD=CO(S):GOSUB 1800
1490 RETURN
1500 REM
1510 REM *                                *
1520 REM *       SUB.PARPADEO             *
1530 REM *      FIGURA  ACTUAL            *
1540 REM *                                *
1550 REM
1560 IF R=100 THEN 3530
1570 IF F5=0 THEN F5=1
1580 S=R:CO(R)=CP:DR(R)=FD:DR$(R)=CH$:XB(R)=X:YB(R)=Y
1590 IF F5=1 AND FD=5 THEN GOSUB 1710:STRIG(0)OFF
1600 CD=CP:GOSUB 1800
1610 CD=CS:GOSUB 1800
```

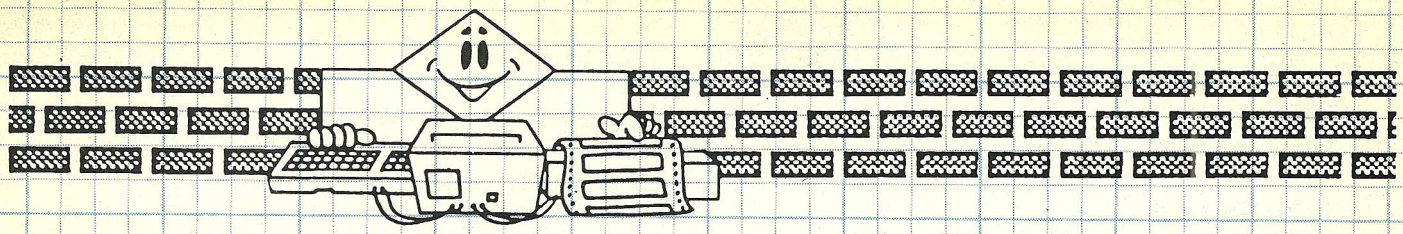
```
1620 IFFD<>4THENPSET(XA(R),YA(R)),CP
1630 S=R:F5=2:RETURN
1640 REM
1650 REM *                          *
1660 REM *  SUB.FIJ.NUEVO ORIGEN    *
1670 REM *   FIGURA  A DISEÑAR      *
1680 REM *                          *
1690 REM
1700 IF P>0 OR R=100 THEN RETURN
1710 IF FR=1THEN PRESET(XA(R),YA(R))
1720 PSET(X,Y),CP:XA(R)=X:YA(R)=Y
1730 FR=1:S=R:RETURN
1740 REM
1750 REM *                          *
1760 REM *  SUB. SELECCION FIGURA   *
1770 REM *        A  DISEÑAR        *
1780 REM *                          *
1790 REM
1800 ON DR(S) GOTO 1810,1820,1830,1850,1910
1810 LINE(XA(S),YA(S))-(XB(S),YB(S)),CD:RETURN
1820 LINE(XA(S),YA(S))-(XB(S),YB(S)),CD,B:RETURN
1830 RX=ABS(XA(S)-XB(S)):RY=ABS(YA(S)-YB(S))
1840 CIRCLE(XA(S),YA(S)),SQR(RX^2+RY^2),CD,,,1.4*(RY+1E-05)/(RX+1
E-05):RETURN
1850 PUT SPRITE 4,(XB(S),YB(S)),CD,4
1860 PUT SPRITE 5,(XB(S),YB(S)),CD,4
1870 IF F5>0 AND P=1 THEN 1890
1880 FORK=0TO20:NEXTK:RETURN
1890 PRESET(XB(S),YB(S))
1900 PAINT(XB(S),YB(S)),CD:RETURN
1910 IF S<R THEN 1990
1920 PUTSPRITE4,(XB(S),YB(S)-1),CD,9
1930 PUTSPRITE5,(XB(S),YB(S)-1),CD,9
1940 J$=INKEY$:IF J$="" THEN 1990
1950 K$=J$:IF LEN(CH$)=255 THEN 1990
1960 IF ASC(J$)=1 THEN J$=INKEY$:J$=CHR$(1)+J$:GOTO 1980
1970 IF ASC(J$)<32 OR ASC(J$)=127 THEN 1990
1980 GOSUB 2010:CH$=CH$+J$
1990 COLOR CD:PRESET(XA(S),YA(S))
2000 PRINT#1,DR$(S):RETURN
2010 IF Y>191 THEN RETURN 1990
2020 IF X<248 THENX=X+8ELSEX=0:Y=Y+8
2030 RETURN
2040 REM
2050 REM *                          *
2060 REM *     SUB. MOVIMENTO       *
2070 REM *    PLUMA  1/8 PUNTO      *
2080 REM *                          *
2090 REM
2100 SWAP H,I:RETURN
2110 REM
2120 REM *                          *
2130 REM *     SUB. SELECCION       *
2140 REM *     OPCIONES MENU        *
2150 REM *                          *
2160 REM
2170 SWAP S1,S2:ON S1 GOTO 2180,2260
```

```
2180 FOR N=2 TO 5:KEY(N)OFF:NEXT N
2190 YC=-20:FF=0:GOSUB 2370
2200 IF P=5 AND FD=5 AND CH$="" THEN X=XA(R):Y=YA(R):F5=1
2210 IF FD=6 THEN 2580
2220 IF FD=7 THEN 3090
2230 IF FD=8 THEN 3330
2240 IF SS=1 THEN SS=0:GOTO 2470
2250 COLOR CP,CS,CB:RETURN
2260 FOR N=2 TO 5:KEY(N)ON:NEXT N
2270 IF FD<>5 THEN CH$=""
2280 YC=4:FF=1:GOSUB 2370
2290 STRIG(0)ON:GOTO 1080
2300 CB=CB+1:IF CB>15 THEN CB=0
2310 GOTO 2370
2320 CS=CS+1:IF CS>15 THEN CS=0
2330 SS=1:GOTO 2370
2340 CP=CP+1:IF CP>15 THEN CP=0
2350 GOTO 2370
2360 FD=FD+1:IF FD>8 THEN FD=1
2370 PUT SPRITE 3,(XC,YC),CB,10
2380 PUT SPRITE 2,(XC,YC),CS,11
2390 PUT SPRITE 1,(XC+3,YC+4),CP,FD
2400 RETURN
2410 REM
2420 REM *                              *
2430 REM *
2440 REM *
2450 REM *                              *
2460 REM
2470 COLOR CP,CS,CB:SCREEN 2
2480 K$="":IF R<1 THEN 2510
2490 FOR S=0 TO R-1
2500 CD=CO(S):ON DR(S) GOSUB 1810,1820,1830,1890,1990:NEXT S:P=0:
F5=0
2510 PSET(XA(R),YA(R)),CO(R):RETURN
2520 REM
2530 REM *                              *
2540 REM
2550 REM
2560 REM *                              *
2570 REM
2580 IF R=0 THEN RETURN
2590 FX=66:GOSUB 3220
2600 PRINT#1,"saving data draw"
2610 ON ERROR GOTO 3260:OPEN"CAS:" FOR OUTPUT AS#2
2620 PRINT#2,"data";",";R;CS;CB
2630 FOR S=0 TO R
2640 PRINT#2,XA(S);YA(S);XB(S);YB(S);CO(S);DR(S);",";DR$(S);",";
2650 NEXT S:CLOSE#2
2660 REM
2670 REM *                              *
2680 REM *
2690 REM *
2700 REM *                              *
2710 REM
2720 NF=NF+1:IF NF>99 THEN NF=1
2730 NF$="CAS:DRAW"+MID$(STR$(NF),2)
```

GOTO 3040

```
2740 FX=66:IF NF>9 THEN FX=62
2750 GOSUB 3230
2760 PRINT#1,"saving ";NF$:COLOR 15
2770 NR=0:OPEN NF$ FOR OUTPUT AS#2
2780 NR=NR+10:PRINT#2,NR;"REM ******************************"
2790 NR=NR+10:PRINT#2,NR;"REM *                            *"
2800 NR=NR+10:PRINT#2,NR;"REM *       MSX DRAW EDITOR      *"
2810 NR=NR+10:PRINT#2,NR;"REM *                            *"
2820 NR=NR+10:PRINT#2,NR;"REM ******************************"
2830 NR=NR+10:PRINT#2,NR;"REM"
2840 NR=NR+10:PRINT#2,NR;"REM .. PULSA  'RUN' para ver ..."
2850 NR=NR+10:PRINT#2,NR;"REM .......  eL  DISEÑO........."
2860 NR=NR+10:PRINT#2,NR;"REM"
2870 NR=NR+10:PRINT#2,NR;"COLOR,";MID$(STR$(CS),2);",";MID$(STR$(
CB),2);":SCREEN 2"
2880 NR=NR+10:PRINT#2,NR;"OPEN";CHR$(34);"GRP:";CHR$(34);"AS#1"
2890 FOR S=0 TO R-1:NR=NR+10
2900 A$=MID$(STR$(XA(S)),2)
2910 B$=MID$(STR$(YA(S)),2)
2920 C$=MID$(STR$(XB(S)),2)
2930 D$=MID$(STR$(YB(S)),2)
2940 E$=MID$(STR$(CO(S)),2)
2950 ON DR(S) GOSUB 2980,2990,3000,3020,3030:NEXT S
2960 NR= NR+10:PRINT#2,NR;"GOTO";NR
2970 CLOSE#2:FD=1:GOTO 2470
2980 PRINT#2,NR;"LINE(";A$;",";B$;")-(";C$;",";D$;"),";E$:RETURN
2990 PRINT#2,NR;"LINE(";A$;",";B$;")-(";C$;",";D$;"),";E$;",B":RE
TURN
3000 RX=ABS(XA(S)-XB(S)):RY=ABS(YA(S)-YB(S)):RC=SQR(RX^2+RY^2):RF
!=1.4*(RY+1E-05)/(RX+1E-05)
3010 PRINT#2,NR;"CIRCLE(";A$;",";B$;"),";MID$(STR$(RC),2);",";E$;
",,,";MID$(STR$(RF!),2):RETURN
3020 PRINT#2,NR;"PRESET(";C$;",";D$;")";":PAINT(";C$;",";D$;"),";
E$:RETURN
3030 PRINT#2,NR;"COLOR";E$;":PRESET(";A$;",";B$;"):PRINT#1,";CHR$
(34);DR$(S);CHR$(34):RETURN
3040 REM
3050 REM *                          *
3060 REM * SUB.INPUT# DATOS DISEÑO *
3070 REM *                          *
3080 REM
3090 FX=66:GOSUB 3220
3100 PRINT#1,"input# data draw"
3110 S=0:ON ERROR GOTO 3250:OPEN"CAS:" FOR INPUT AS#2
3120 INPUT#2,DD$,R,CS,CB
3130 FOR S=0 TO R
3140 INPUT#2,XA(S),YA(S),XB(S),YB(S),CO(S),DR(S),DR$(S):NEXT S:IF
 DR(R-1)<3 OR DR(R-1)=4 THEN FR=0 ELSE FR=1
3150 CLOSE#2:FD=1:GOTO 2470
3160 REM
3170 REM *                          *
3180 REM *    SUB.GRAPH. I/O  Y      *
3190 REM * CONTROL DE INTERRUPCIONES *
3200 REM *                          *
3210 REM
3220 LINE(56,181)-(200,191),1,B
3230 LINE(56,182)-(200,190),14,BF
```

```
3240 PSET(FX,183),14:COLOR 1:RETURN
3250 R=S
3260 RESUME 2970
3270 REM
3280 REM *                          *
3290 REM *     SUB.CANCELACION      *
3300 REM *     TOTAL DEL DISEÑO     *
3310 REM *                          *
3320 REM
3330 ERASE XA,YA,XB,YB,CO,DR,DR$:P=0
3340 R=0:S=0:COLOR CP,CS,CB:SCREEN 2
3350 DIM XA(100),YA(100),XB(100),YB(100),CO(100),DR(100),DR$(100)
3360 H=1:I=8:FD=1:XC=120
3370 X=128:Y=96:XA(R)=X:YA(R)=Y
3380 CO(R)=CP:FR=1:PSET(X,Y):RETURN
3390 REM
3400 REM *                          *
3410 REM * SUB. ILUSTRACION  MENU   *
3420 REM *                          *
3430 REM
3440 DATA <F1>,<F2>,<F3>,<F4>,<F5>,BD3R6,D5R6U5L5,BD2D2F2R2E2U2H2
L2G1,R2F1L3D1R3F4D1L1H4L1,BD5BR1R3E1H1L2H1E1R3BU1BL2D6,BD5BR1F1r2
E1U1H1L2H1U1E1R2F1,BR1D6R4,BD1F5R1H5BR4G5R1E5,<CUR>,<SPC>,<TAB>,<
SEL>,<DEL>,<INS>,<    >,<RET>,<HOM>
3450 DATA activa menu/programa.....,cambia color borde......,camb
ia color fondo.....,cambia color 1´ plano...,"selecciona opciones
.......",=linea,=rectangulo,=circulo-elipse,=paint,=caracteres,=s
alva a cinta,=carga de cinta,=cancelacion total
3460 DATA mueve la pluma...........,mov.pluma 1/8 punto......,fij
a origen de figura,parpadeo f'gura actual..,parpadeo fig.preceden
te..,parpadeo fig.siguiente...,cancela fig. parpadeante,diseña  f
ig.parpadeante,continua el diseño entero
3470 REM
3480 REM *                          *
3490 REM *       SUB.  MENSAJE      *
3500 REM *   SATURACION  MEMORIA    *
3510 REM *                          *
3520 REM
3530 YE=10:S3=14:S4=1:FOR N=1 TO 8
3540 SWAP S3,S4:GOSUB 3570:NEXT N
3550 YE=-20:GOSUB 3570
3560 P=0:F5=0:RETURN
3570 PUT SPRITE 15,(120,YE),14
3580 PUT SPRITE 14,(120,YE),S3
3590 IFS3=1THENPLAY"S1M8000L32O4N40"
3600 FORK=0TO50:NEXTK:RETURN
```



LA RANA LOCA

```
10 ' 000000000000000000000000000000
20 ' 00000                      00000
30 ' 00000    La Rana Loca      00000
40 ' 00000                      00000
60 ' 00000                      00000
70 ' 00000    Julio de 1986     00000
80 ' 00000                      00000
90 ' 000000000000000000000000000000
100 '
110 '
120 '            PORTADA
130 '
140 COLOR 15,1,1:SCREEN 2,0,1
150 '                L
160 DRAW"s4C6BM15,15R3U1R2D1R2D6L1D7R1D6L1D4L1D1R1D1R1D1R6D1R4D3R
3D2L1D1L9D1L3U1L3U2L3U7L2U7R1U4R1U10L1U4R1"
170 '                A
180 DRAW"C15BM45,47U2L1U9R1U5L2U8R1E1U2R1U3R5U4E1R4D1R3D3R2D3R2F1
D8R2D13L1D2L1D2L4D1L3U3E1U6R3U6L2H1U7L5D1L2D1L2D5L2R2D3L1D6R1D5R1
D2R1D2L5U1BM50,28R7D1BM50,31R3D1R1D1R8"
190 '                R
200 DRAW"C5BM99,13D6R2D11L1D1G3D2F1R4D8G1D1R3D2R2D1R4H3U4R1U6L1U4
R2F6D3R1D2R1D4R3U2R1U4R2U3H4L2U2L2U1L1U3L3U1R1U1R2U1R4U3R1U1R1U3R
1U4L3H3L5U1L2U1L3U1L3G3R1BM107,15R3D2R3D3L1G1D1L1G1D1L3U1R1U2L1U3
R1U4R1"
210 '                A
```

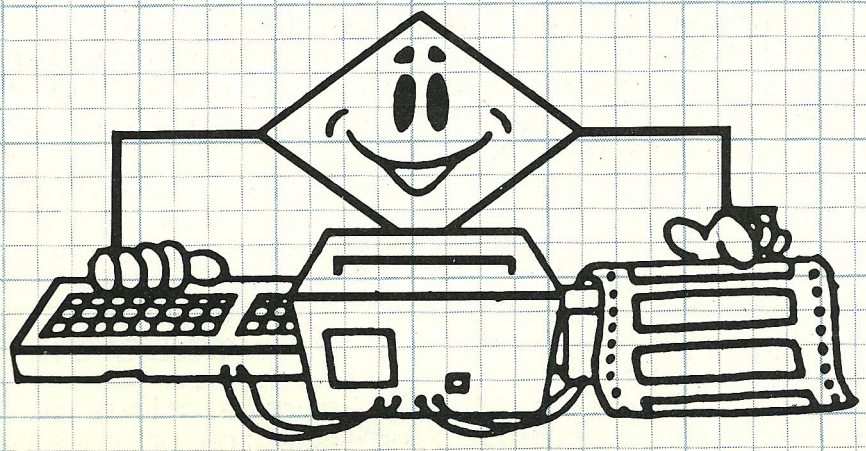
```
220 DRAW"C10BM133,47U2L1U9R1U5L2U8R1E1U2R1U3R5U4E1R4D1R3D3R2D3R2F
1D8R2D13L1D2L1D2L4D1L3U3E1U6R3U6L2H1U7L5D1L2D1L2D5L2R2D3L1D6R1D5R
1D2R1D2L5U1BM138,28R7D1BM138,31R3D1R1D1R8"
230 '                N
240 DRAW"C13BM164,49U2L1U9R1U5L2U8R1E1U2R1U3L2U4E1R2U2R2F2D5R2D4F
3R2D3F3R1U5R1U2H2R2U3E2U2L2U3E2R2F2R1D2R1F2D5G2D3G2D4F1D2R2D6G3D3
L2U2L1H2U3L2H2U3L3H3L2D3F1D1L2D4F3L2D2G2L4"
250 '                A
260 DRAW"C12BM203,49U2L1U9R1U5L2U8R1E1U2R1U3R5U4E1R4D1R3D3R2D3R2F
1D8R2D13L1D2L1D2L4D1L3U3E1U6R3U6L2H1U7L5D1L2D1L2D5L2R2D3L1D6R1D5R
1D2R1D2L5U1BM208,30R7D1BM208,33R3D1R1D1R8"
270 '                L
280 DRAW"BM62,70C7R4U1R3D11R1D8L1D6R1D5R1D1R6D1R1D2R2D1L4D1L6D1L5
U6L3H1U2R2U8R2U6L2H1U8R1U5R1"
290 '                O
300 DRAW"c10BM104,67R2D2R3D4F1R1F1D1F4D12L2D3L2G1D2L3D5L4D3L7U2L4
H1U4L3U9L1U6E5L1H1U4E1U4E1R5U2R3D1R2D1BM99,77D3L2D2L1D3L2D8R1D1R4
D2R3U1E1U1R3U2E1R1E1U3H1U1H1U5L1U4L1G6"
310 '                C
320 DRAW"bm145,70C3U1L2U2L8D1L5D4L1D3L1D7R1D7L1D4R1D2R2D7R3D1R7D1
R6U1R1U5L2U5H1L5D1L3U1L1U2L1U5L1U6L1U5R5U1R1U1R2U1R1r3u1"
330 '                A
340 DRAW"C9BM160,105U2L1U9R1U5L2U8R1E1U2R1U3R5U4E1R4D1R3D3R2D3R2F
1D8R2D13L1D2L1D2L4D1L3U3E1U6R3U6L2H1U7L5D1L2D1L2D5L2R2D3L1D6R1D5R
1D2R1D2L5U1BM163,87R10D1BM163,90R3D1R1D1R8"
350 '
380 '
390 PAINT(16,16),6
400 PAINT(46,44),15
410 PAINT(54,30),15
420 PAINT(100,14),5
430 PAINT(135,46),10
440 PAINT(142,30),10
450 PAINT(165,48),13
460 PAINT(205,48),12
470 PAINT(212,31),12
480 PAINT(64,73),7
490 PAINT(105,68),10
500 PAINT(136,73),3
510 PAINT(163,104),9
520 PAINT(167,89),9
530 '
540  N=(N+1)MOD(15):VDP(7)=N:FOR I=1 TO 10 :NEXT
550 FF=FF+1:IF FF>227 THEN570
560 GOTO 540
570 '
580 '
590 COLOR 15,1,1
600 SCREEN 1,2:KEY OFF:WIDTH 32
610 LOCATE 1,10:PRINT"                PULSA
                    0 PARA CURSOR 1 PARA JOYSTICK"
620 X$=INKEY$
630 IF X$="0" THEN CT=0:GOTO 660
640 IF X$="1" THEN CT=1:GOTO 660
650 GOTO 620
660 CLS
670 LOCATE 6,12:PRINT"UN MOMENTO POR FAVOR"
```

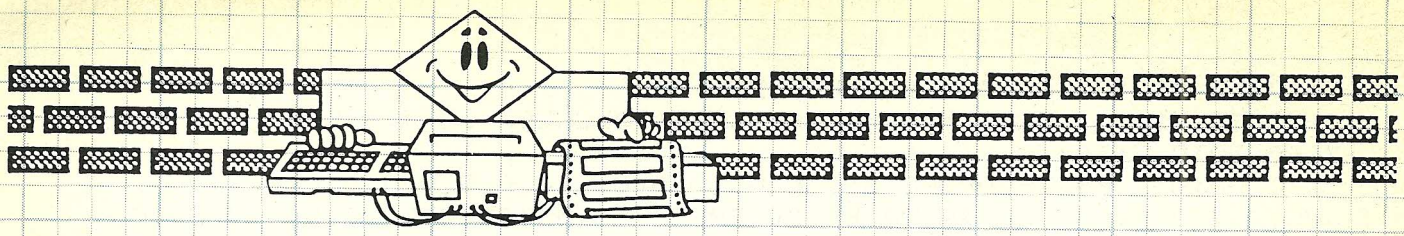
```
670 LOCATE 6,12:PRINT"UN MOMENTO POR FAVOR"
680 '
690 '
700 FOR K=1 TO 12:B$="":FORI=1TO 32 :READ A$:B$=B$+CHR$(VAL("&H"+
A$)):NEXT:SPRITE$ (K)=B$:NEXT
710 '
720 '  REDEFINICION DE CARACTERES
730 '
740 FOR I=BA+1600 TO BA+1615
750 VPOKE 8192+25,33
760 READ A$:B=VAL("&H"+A$):VPOKE I,B:NEXT
770 GOSUB 2190
780 LOCATE 6,12:PRINT"                          "
790 '
800 HH=11:CR=10:Y=158:X=120
810 '
820 GOSUB 1820:GOSUB 1830:GOSUB 1840:GOSUB 1850:GOSUB 1860 :GOSUB
 1870
830 '
840 SPRITE ON
850 STRIG(0)ON:ON STRIG GOSUB 1260
860 ON INTERVAL=20 GOSUB 1770 :GOSUB 1790
870 ON SPRITE GOSUB 1610
880 '
890 TIME=0
900 '
910 ' BUCLE PRINCIPAL
920 '
930 IF TIME >200 THEN GOSUB 1740
940 IF X>215 THEN X=215
950 IF X<25 THEN X=25
960 IF A1=0 THEN GOSUB 1070 ELSE GOSUB 1030
970 IF Y<158 THEN Y=Y+2
980 IF Y>158 THEN Y=158
990 IF GO>5 THEN 2060
1000 GOTO 930
1010 '
1020 '
1030 '
1040 X=X+MM:Y=Y-HH:IF MM=4 THEN GOSUB 1360:GOTO 990 ELSE GOSUB 14
50:GOTO 990
1050 '
1060 '
1070 DI=STICK(CT)
1080 IF DI=0 THEN  GOSUB 1190:RETURN
1090 IF DI=1 THEN Y=Y-6:GOSUB 1210
1100 IF DI=5 THEN Y=Y+4:GOSUB 1210
1110 IF DI=2 THEN X=X+4:Y=Y-4:GOSUB 1210
1120 IF DI=3 THEN X=X+4:GOSUB 1210
1130 IF DI=4 THEN X=X+4:Y=Y+4:GOSUB 1210
1140 IF DI=6 THEN X=X-4:Y=Y+4:GOSUB 1230
1150 IF DI=7 THEN X=X-4:GOSUB 1230
1160 IF DI=8 THEN X=X-4:Y=Y-4:GOSUB 1230
1170 RETURN
1180 '
1190 IF MM=4 THEN GOSUB 1320:RETURN ELSE GOSUB 1410:RETURN
1200 '
1210 MM=4:J=(J+1) MOD(3)+1:ON J GOSUB 1320,1360:RETURN
```

```
1220 '
1230 MM=-4:J1=(J1+1)MOD(3)+1:ON J1 GOSUB 1410,1450:RETURN
1240 '
1250 '
1260 STRIG(0) OFF
1270 A1= 1
1280 RETURN
1290 '
1300 ' POSICIONES DE LA RANA
1310 '
1320 PUTSPRITE 1,(X+15,Y-7),CR,1
1330 PUTSPRITE 2,(X-1,Y),CR,2
1340 PUTSPRITE 4,(X-14,209),CR,4
1350 RETURN
1360 PUTSPRITE 1,(X+15,Y-13),CR,1
1370 PUTSPRITE 2,(X-1,Y-5),CR,3
1380 PUTSPRITE 4,(X-14,Y+8),CR,4
1390 IF A1=1 THEN GOSUB 1530
1400 RETURN
1410 PUTSPRITE 1,(X-15,Y-7),CR,6
1420 PUTSPRITE 2,(X+1,Y),CR,7
1430 PUTSPRITE 4,(X+14,209),CR,9
1440 RETURN
1450 PUTSPRITE 1,(X-15,Y-13),CR,6
1460 PUTSPRITE 2,(X+1,Y-5),CR,8
1470 PUTSPRITE 4,(X+14,Y+8),CR,9
1480 IF A1=1 THEN GOSUB 1530
1490 RETURN
1500 '
1510 ' RUTINA DE SALTO
1520 '
1530 HH=HH-1.15:IF HH<-11 THEN GOSUB 1560
1540 RETURN
1550 '
1560 A1=0:STRIG(0)ON:HH=11 :RETURN
1570 '
1580 '
1590 '   RUTINA DE CHOQUES
1600 '
1610 IF X-15>45 THEN 1630
1620 IF (X1+4)<(X+25) AND (X1+4)>(X-15) AND (Y1+4)>Y-12 AND Y1+4<
Y+16 THEN BEEP:PU=PU+1:GOSUB 1820:TIME=0:GOTO 1720
1630 IF X-15>85 THEN 1650
1640 IF (X2+4)<(X+25) AND (X2+4)>(X-15) AND (Y2+4)>Y-12 AND Y2+4<
Y+16 THEN BEEP:PU=PU+1:GOSUB 1830:TIME=0:GOTO 1720
1650 IF X-15>125 THEN 1670
1660 IF (X6+4)<(X+25) AND (X6+4)>(X-15) AND (Y6+4)>Y-12 AND Y6+4<
Y+16 THEN BEEP:PU=PU+1:GOSUB 1870:TIME=0:GOTO 1720
1670 IF X-15>165 THEN 1690
1680 IF (X3+4)<(X+25) AND (X3+4)>(X-15) AND (Y3+4)>Y-12 AND Y3+4<
Y+16 THEN BEEP:PU=PU+1:GOSUB 1840:TIME=0:GOTO 1720
1690 IF X-15>200 THEN 1710
1700 IF (X4+4)<(X+25) AND (X4+4)>(X-15) AND (Y4+4)>Y-12 AND Y4+4<
Y+16 THEN BEEP:PU=PU+1:GOSUB 1850:TIME=0:GOTO 1720
1710 IF (X5+4)<(X+25) AND (X5+4)>(X-15) AND (Y5+4)>Y-12 AND Y5+4<
Y+16 THEN BEEP:PU=PU+1:GOSUB 1860:TIME=0
1720 SPRITE OFF:INTERVAL ON:RETURN
```

```
1730 '
1740 FOR I=1 TO 6 :BEEP:NEXT:GO=GO+1:TIME=0:RETURN
1750 '
1760 '
1770 SPRITE ON:INTERVAL OFF
1780 '
1790 KK=1+(KK+1)MOD(7)
1800 ON KK GOSUB 1820,1830,1840,1850,1860,1870:RETURN
1810 '
1820 X1=15+INT(RND(1)*30):Y1=INT(RND(1)*170):PUTSPRITE 6,(X1,Y1),
7,11:RETURN
1830 X2=55+INT(RND(1)*30):Y2=INT(RND(1)*170):PUTSPRITE 7,(X2,Y2),
13,12:RETURN
1840 X3=135+INT(RND(1)*30):Y3=INT(RND(1)*170):PUTSPRITE 8,(X3,Y3)
,2,11:RETURN
1850 X4=175+INT(RND(1)*25):Y4=INT(RND(1)*170):PUTSPRITE 9,(X4,Y4)
,15,12:RETURN
1860 X5=210+INT(RND(1)*25):Y5=INT(RND(1)*170):PUTSPRITE 10,(X5,Y5
),6,11:RETURN
1870 X6=95+INT(RND(1)*30):Y6=INT(RND(1)*170):PUTSPRITE 11,(X6,Y6)
,5,12:RETURN
1880 '
1890 '   sprites  de la rana
1900 '
1910 DATA0,0,C,12,32,7F,FE,FF,FF,F0,FE,7F,fF,78,0,0,0,0,0,0,0,0,8
0,C0,C0,0,0,C0,80,0,0,0
1920 DATA0,0,0,3,F,1F,3A,78,60,D8,BF,FC,7E,7B,33,1,3,1F,FF,F0,A3,
4,38,38,2C,CE,5,5,0,0,E0,50
1930 DATA0,0,0,3,F,1F,3A,78,60,d8,BF,FE,7C,FC,F8,E0,3,1F,Ff,F0,A3
,7,38,38,30,F0,18,C,14,14,0,0
1940 DATA 0,0,0,0,10,8,25,1F,4E,38,0,0,0,0,0,0,0,8,18,3C,78,E0,80
,0,0,0,0,0,0,0,0,0
1950 DATA0,0,0,0,0,1,B,F,3F,4E,80,0,0,0,0,0,0,0,0,1E,B9,F0,80,80,
80,0,0,0,0,0,0,0
1960 ' sprites rana girarada
1970 '
1980 DATA 0,0,0,0,0,0,1,3,3,0,0,3,1,0,0,0,0,0,30,48,4C,FE,7F,FF,F
F,F,7F,FE,FF,1E,0,0
1990 DATA C0,F8,FF,F,C5,20,1C,1C,34,73,A0,A0,0,0,7,A,0,0,0,C0,F0,
F8,5C,1E,6,1B,FD,3F,7E,DE,CC,80
2000 DATA C0,F8,FF,F,C5,E0,1C,1C,C,F,18,30,28,28,0,0,0,0,0,C0,F0,
F8,5C,1E,6,1B,FD,7F,3E,3F,1F,7
2010 DATA 0,10,18,3C,1E,7,1,0,0,0,0,0,0,0,0,0,0,0,0,0,8,10,A4,F8,
72,1C,0,0,0,0,0,0
2020 DATA 0,0,0,78,9D,F,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,80,D0,F0,FC
,72,1,0,0,0,0,0
2030 '
2040 'MENSAJES DE FIN DE JUEGO
2050 '
2060 CLS:COLOR 1,15,6
2070 PUT SPRITE1,(110,208),1,1
2080 LOCATE 3,6:PRINT" LO SIENTO LOS HABITANTES"
2090 LOCATE 4,8:PRINT" DE LA CHARCA SE TE HAN"
2100 LOCATE 10,10:PRINT" INDIGESTADO"
2110 LOCATE 5,14:PRINT"PUNTOS CONSEGUIDOS =";PU
2120 LOCATE 2,18:PRINT" LO INTENTAS DE NUEVO [S/N]"
2130 X$=INKEY$
```

```
2140 IF X$="S" OR X$="s" THEN RUN 590
2150 IF X$="n" OR X$="N" THEN SCREEN 0:COLOR 15,4,4:END
2160 GOTO 2130
2170 DATA5A,BD,7E,DB,FF,66,3C,C3,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,0,0,0,0,88,49,2A,BE,6B,C9,FF,63,3E,49,DD,0,0,0,0,0,80,0,0
,80,0,80,80,0,0,0,80,0,0,0,0,0
2180 DATA0,49,2A,D2,35,B5,5B,EE,DA,55,6D,DE,7F,B6,FF,D5
2190 FOR I=6144  TO 6911 STEP 32:VPOKE I,201:VPOKE I+1,201:NEXT
2200 FOR I=6175 TO 6912 STEP 32:VPOKEI,201:VPOKE I-1,201:NEXT
2210 FOR I=6881 TO 6910:VPOKEI,201:NEXT
2220 FOR I=6849 TO 6878:VPOKEI,200:NEXT
2230 RETURN
```

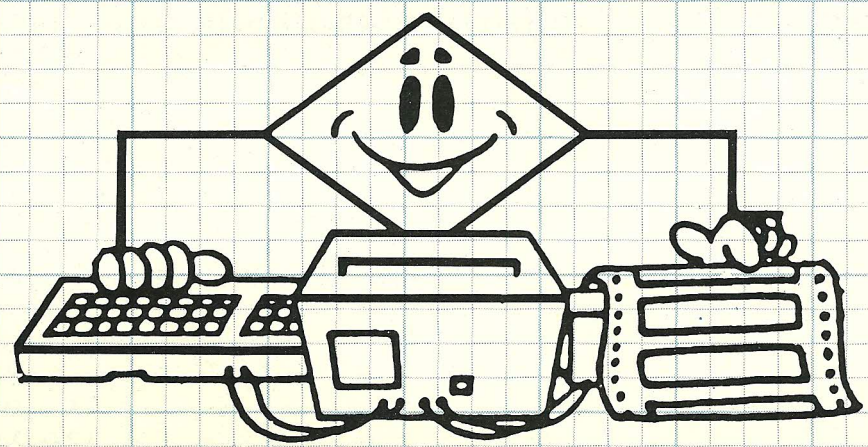


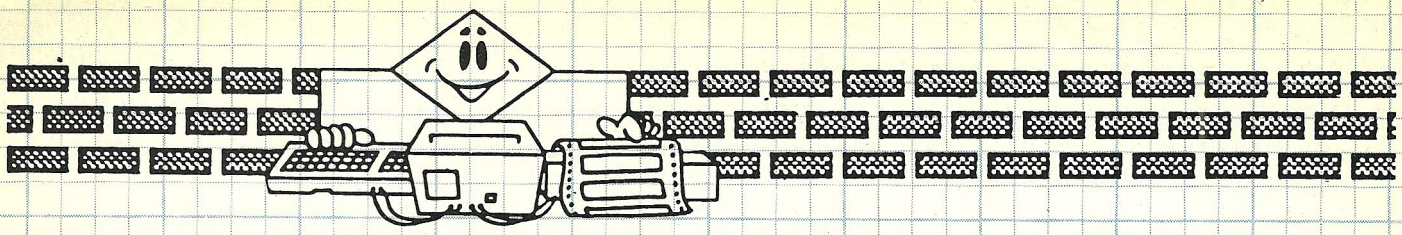


AJUSTE A UNA RECTA

```
20 COLOR 15,4,4:SCREEN 0:WIDTH 39
21 LOCATE 5,2:PRINT"AJUSTE A UNA RECTA"
22 LOCATE 2,5:PRINT"Este programa ajusta una nube de     puntos a
 una recta por el método de losmínimos cuadrados. También present
a en pantalla otros datos de interés como"
23 PRINT"varianza, desviaciones típicas, coe-   ficientes de regr
esión, correlación,   etc "
24 PRINT:PRINT"  Pulsa una tecla para comenzar"
25 IF INKEY$="" THEN 25 ELSE CLS
30 DEFSNGA-Z
40 INPUT"NUMERO DE PUNTOS:";NP:DIMX(NP),Y(NP),Z(NP)
50 FORI=1TONP:INPUT"X=";X(I):INPUT"Y=";Y(I):NEXTI
60 EX=0:FORI=1TONP:EX=EX+X(I):NEXTI:EX=EX/NP
70 EY=0:FORI=1TONP:EY=EY+Y(I):NEXTI:EY=EY/NP
80 DX2=0:FORI=1TONP:DX2=DX2+(X(I)-EX)*(X(I)-EX):NEXTI:DX2=DX2/NP
90 DY2=0:FORI=1TONP:DY2=DY2+(Y(I)-EY)*(Y(I)-EY):NEXTI:DY2=DY2/NP
100 FXY=0:FORI=1TONP:FXY=FXY+X(I)*Y(I):NEXTI:FXY=FXY/NP
110 A=(FXY-EX*EY)/DX2:B=EY-EX*A
120 CR=A:CC=(FXY-EX*EY)/SQR(DY2*DX2):RC=CC*CC:Z=B:GOSUB300
130 CLS:LOCATE0,0:PRINT"E[X]=";EX:LOCATE0,1:PRINT"E[Y]=";EY:LOCAT
E0,2:PRINT"E[XY]=";FXY:LOCATE0,3:PRINT"COV[X,Y]=";FXY-EX*EY:LOCAT
E0,4:PRINT"VAR[X]=";DX2
140 LOCATE0,5:PRINT"VAR[Y]=";DY2:LOCATE0,6:PRINT"RECTA DE REGRESI
ON (Y SOBRE X):":LOCATE0,7:PRINT"Y="+STR$(A)+"X"+S$:LOCATE0,8:PRI
NT"COEFICIENTE DE REGRESION="
150 LOCATE0,9:PRINTCR:LOCATE0,10:PRINT"COEFICIENTE DE CORRELACION
=":LOCATE0,11:PRINTCC:LOCATE0,12:PRINT"RAZON DE CORRELACION=":LOC
```

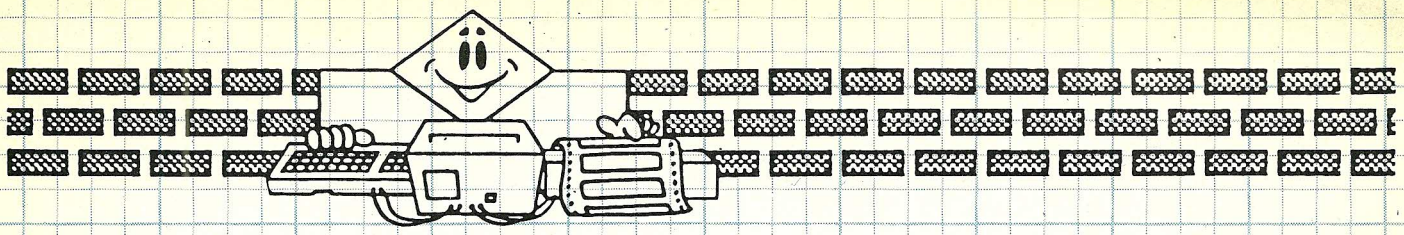
```
ATEO,13:PRINTRC
160 LOCATEO,16:PRINT"PULSA TECLA PARA GRAFICA.":LOCATEO,18:PRINT"
LA GRAFICA PERMANECERA EN":LOCATEO,19:PRINT"PANTALLA HASTA QUE PU
LSES":LOCATEO,20:PRINT"TECLA."
170 FORI=1TONP:Z(I)=X(I):NEXTI:GOSUB320:NX=MIN:FORI=1TONP:Z(I)=X(
I)-NX:NEXTI:GOSUB350:MX=MA:FORI=1TONP:X(I)=Z(I)*255/MX:NEXTI
180 FORI=1TONP:Z(I)=Y(I):NEXTI:GOSUB320:NY=MIN:FORI=1TONP:Z(I)=Y(
I)-NY:NEXTI:GOSUB350:MY=MA:FORI=1TONP:Y(I)=Z(I)*190/MY:NEXTI
190 G$=INKEY$:IFG$=""GOTO 190
200 SCREEN2
210 LINE(-NX*255/MX,0)-(-NX*255/MX,190),1:LINE(0,190+NY*190/MY)-(
255,190+NY*190/MY),1
220 FORI=1TONP:PSET(X(I),190-Y(I)),1:NEXTI
230 FORI=0TO256:X=I*255/MX:IF(X<0)OR(X>256)GOTO260
240 Y=190-(A*I+B)*190/MY:IF(Y<0)OR(Y>190)GOTO 260
250 PSET(X,Y),15
260 NEXTI
270 G$=INKEY$:IFG$=""GOTO 270
280 SCREEN0:LOCATEO,10:PRINT"PULSA O PARA OTRO.":LOCATEO,12:PRINT
"PULSA F PARA FINALIZAR.
290 G$=INKEY$:IFG$=""THENGOTO 290ELSEIFG$="O"ORG$="o"THENRUNELSEI
FG$="F"ORG$="f"THENGOTO380ELSEGOTO 290
300 S$=STR$(Z):IFZ>=0THENS$="+"+MID$(STR$(Z),2)
310 RETURN
320 MIN=0:FORI=1TONP:IFZ(I)>MINGOTO 340
330 MIN=Z(I)
340 NEXTI:RETURN
350 MA=0:FORI=1TONP:IFZ(I)<MAGOTO 370
360 MA=Z(I)
370 NEXTI:RETURN
380 CLS:LOCATE4,10:PRINT"PARA EL SIGUIENTE PROGRAMA"
390 LOCATE4,12:PRINT"PULSA PLAY EN EL CASSETTE"
400 CLOAD
```





TRUCO 3

```
10 SCREEN 2
20 COLOR 10,4,10
30 FOR N =1 TO 10 STEP 2
40 LINE (0+N,63+N)-(255-N,128-N),1,B
50 NEXT N
60 FOR N=0 TO 255 STEP 2
70 VPOKE N+6144,0:VPOKEN+6145,1:VPOKEN+6656,0:VPOKE N+6657,1
80 NEXT N
90 VPOKE A,255:VPOKE 15-A,255:VPOKE 4096+A,255:VPOKE 4111-A,255
100 IF A=7 THEN VPOKE A,129:VPOKE 15-A,129:VPOKE 4096+A,129:VPOKE
 4111-A,129:A=0:GOTO 90:ELSE A=A+1
110 VPOKE A-1,129:VPOKE 16-A,129:VPOKE 4096+A-1,129:VPOKE 4112-A,
129
120 GOTO 90
```



TENIS

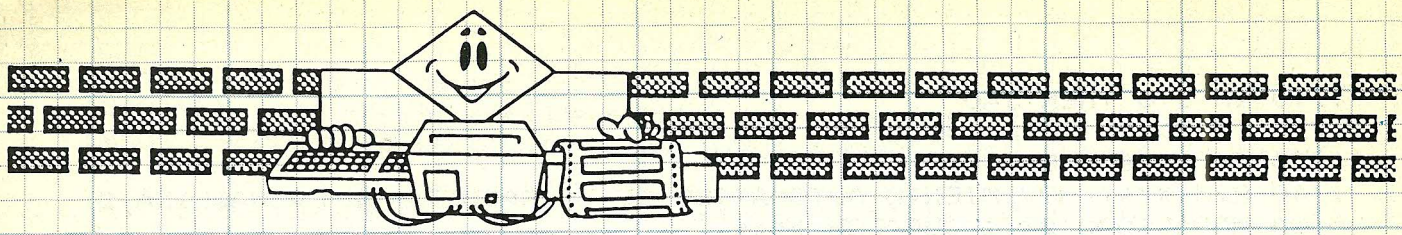
```
20 REM *** DIBUJO DE LA PALABRA TENIS ***
30 COLOR 1,14,8
40 CLS
50 SCREEN 2
60 PSET(38,20),1
70 DRAW"R30D8L11D22L8U22L11U8"
80 PAINT(40,22),1
90 PSET(79,20),4
100 DRAW"R25D6L17D6R17D6L17D6R17D6L25U30"
110 PAINT(81,22),4
120 PSET(115,20),13
130 DRAW"R6D0F1D1F1D1F1D0F1D1F1D0F1D1F1D1F1D0F1D1F1D1F1D0F1U19R6D
30L6U0H1U1H1U0H1U1H1U0H1U1H1U0H1U1H1U0H1U1H1U1H1U1H1D19L6U30"
140 PAINT(117,22),13
150 PSET(150,20),2
160 DRAW"R6D30L6U30"
170 PAINT(152,22),2
180 PSET(167,20),6
190 DRAW"R25D7L19D5R19D18L25U7R19U5L19U18"
200 PAINT(169,22),6
210 REM *** DIBUJO DEL TENISTA ***
220 CIRCLE(98,85),11,1
230 PSET(90,80),1
240 DRAW"R25"
250 PAINT(100,77),1
260 CIRCLE(97,85),1,1
```

```
270 CIRCLE(105,85),1,1
280 PSET(101,86),1
290 DRAW"F3L2"
300 CIRCLE(100,90),3,1,3.14,6.28
310 PSET(95,96),1
320 DRAW"D2G1D2G1D1"
330 PSET(101,96),1
340 DRAW"D2G1D2G1D1"
350 PSET(99,104),6
360 DRAW"R2E1R2E1R2E1R2E1R3D8L2D1L2D1L4D0L1D1D3G1D3G1D3G1D3G1D3G1
D3G1L10U22G7U4H1U4H1E8R4D1F3D2F3E2U3E1U3"
370 PAINT(102,106),6
380 PSET(116,102),1
390 DRAW"E1R2E1R2E1R2E1R2E1R2E1R2U3R6D8L4D2L2U2L2G1L2G1L2G1L2G1L2
G1L2G1D1U8"
400 PSET(79,113),1
410 DRAW"G2D1G3D1G2D1G3D1G2D1G1U2L6D8R4D2R2U2E2U1E3U1E2U1E2U1E3U1
E1"
420 PSET(99,136),4
430 DRAW"L10G12F2R2F2R2F2R2E6F2R2F2R2E2U2E2U2E2U2H1L1H1L1H1L1H2L1
"
440 PAINT(95,140),4
450 PSET(106,151),1
460 DRAW"F16D1F1D1F1D1F1D1F1D1F1D1F1D1F1D1F1D1F1D1F1D1F1D4R4U2F1R1F1R2FOR
2U1H7L5R5U1H1U2H1U1H1U2H1U1H1U1H1U2H1U1H1U1H15"
470 PAINT(135,183),1
480 PSET(141,94),1
490 DRAW"E14F2G16"
500 PAINT(143,95),1
510 CIRCLE(167,72),12,1
520 CIRCLE(190,82),4,3
530 PAINT(190,82),3
540 PSET (77,152),1
550 DRAW"G11L21D5R1D11R1E1U1E1U1E1U1E1U1E1U6D6R4F1R4F1R5E18"
560 PAINT(47,169),1
570 FOR J=1 TO 2000:NEXT J
580 REM *** INTRODUCCION DE LOS DATOS PRELIMINARES ***
590 SCREEN 1
600 KEY OFF
610 CLS:BEEP:LOCATE 1,10: LINE INPUT "INDICA 1 O 2 JUGADORES ";W$
620 IF W$="2" THEN 650
630 IF W$="1" THEN 1250
640 W=VAL(W$): IF W<1 OR W>2 THEN 610
650 CLS:BEEP:LOCATE 1,10: LINE INPUT "NOMBRE DEL PRIMER JUGADOR:
        ";Q$
660 CLS:BEEP:LOCATE 1,10:LINE INPUT "NOMBRE DEL SEGUNDO JUGADOR:
        ";N$
670 CLS:BEEP:LOCATE 0,7:PRINT"****ELIJA NIVEL DE JUEGO ****":LOCA
TE 0,9 :LINE INPUT"DE 4 A 8: ";R$
680 R=VAL(R$)
690 IF R<4 OR R>8 THEN 670
700 CLS:BEEP:LOCATE 0,10: LINE INPUT "A CUANTOS PUNTOS SERA EL FI
N DEL MACH ?";T$:T=VAL(T$)
710 IF T<=0 OR T>25 THEN 700
720 REM *** INSTRUCCIONES 2 JUGADORES ***
730 CLS:LOCATE 10,6:PRINTQ$
740 LOCATE 3,10:PRINT"JUEGAS A LA IZQUIERDA"
```

```
750 LOCATE 3,12:PRINT"TU RAQUETA ES LA NEGRA"
760 LOCATE 3,14:PRINT"PULSA S PARA AVANZAR"
770 LOCATE 9,16:PRINT"A PARA RETROCEDER"
780 LOCATE 9,18:PRINT"W PARA SUBIR"
790 LOCATE 9,20:PRINT"Z PARA BAJAR"
800 FOR G=1 TO 4500:NEXT G
810 FOR K=1 TO 25:PRINT:BEEP:NEXT K
820 CLS:LOCATE 10,6:PRINT N$
830 LOCATE 3,10: PRINT"JUEGAS A LA DERECHA "
840 LOCATE 3,12:PRINT"TU RAQUETA ES LA AZUL"
850 LOCATE 3,14:PRINT"PULSA O PARA AVANZAR"
860 LOCATE 9,16:PRINT"P PARA RETROCEDER"
870 LOCATE 9,18:PRINT"O PARA SUBIR"
880 LOCATE 9,20:PRINT"L PARA BAJAR"
890 FOR G=1 TO 4500:NEXT G
900 FOR K=1 TO 25 :PRINT:BEEP:NEXT K
910 REM *** COMIENZO DEL JUEGO:POSICIONES INICIALES DE LASRAQUETA
S Y LA PELOTA ***
920 COLOR 1,14,2
930 SCREEN 3
940 X=126:Y=0
950 X1=4:Y1=R
960 J=12: K=94
970 L=240:M=94
980  IF N$<>"MSX-BORG"THEN GOSUB 1410 ELSE GOSUB 1630
990 PSET (J,K-4),1:PSET(J,K),1:PSET(J,K+4),1
1000 PSET (L,M-4),4:PSET(L,M),4:PSET(L,M+4),4
1010 REM *** DIBUJO LINEA DIVISORIA ***
1020 LINE(126,0)-(126,192),6
1030 REM *** MOVIMIENTO Y REBOTES DE LA PELOTA ***
1040 XI=(X-X1)
1050 YI=(Y+Y1)
1060 PSET(XI,YI),1
1070 PRESET (X,Y)
1080 X=XI:Y=YI
1090 IF YI>188 THEN Y1=-R:BEEP
1100 IF YI<2 THEN Y1=R:BEEP
1110 IF POINT(XI-X1,YI)=1 THEN X1=-4:BEEP:GOTO 1040
1120 IF POINT(XI,YI+Y1)=1 THEN X1=-4:BEEP:GOTO 1040
1130 IF POINT(XI,YI+Y1)=4 THEN X1=4:BEEP:GOTO 1040
1140 IF POINT(XI-X1,YI)=4 THEN X1=4:BEEP:GOTO 1040
1150 REM *** MARCADOR ***
1160 IF XI>255 THEN X1=-4:Y1=R:X=126:Y=0:PLAY"O5ABDO4DD":SCREEN 1
:GOTO 1190
1170  IF XI<0 THEN PLAY"O5ABCO4DD":SCREEN 1:GOTO1200
1180 GOTO 980
1190 A=A+1:LOCATE 0,6:PRINT"****** PUNTO PARA LA                    R
AQUETA NEGRA ******":LOCATE 3,11:PRINT;Q$" NEGRA=";A:PRINT"    ";N
$" AZUL=";B: FOR V=1 TO1400:NEXT V:IF A=T THEN GOTO 1210 ELSE SCR
EEN 3:GOTO 960
1200 KEY OFF: B=B+1:LOCATE 0,6:PRINT"****** PUNTO PARA LA
          RAQUETA AZUL ******":LOCATE 3,11:PRINT N$" AZUL=";B:LOCA
TE 3,12:PRINT Q$"  NEGRA=";A:FOR V=1 TO1400:NEXT V:IF B=T THEN GO
TO 1220 ELSE GOTO 930
1210 LOCATE 0,16: PRINT "HAS GANADO ";Q$",RAQUETA NEGRA":GOTO 182
0
1220 LOCATE 0,16: PRINT "HAS GANADO ";N$",RAQUETA AZUL"
```

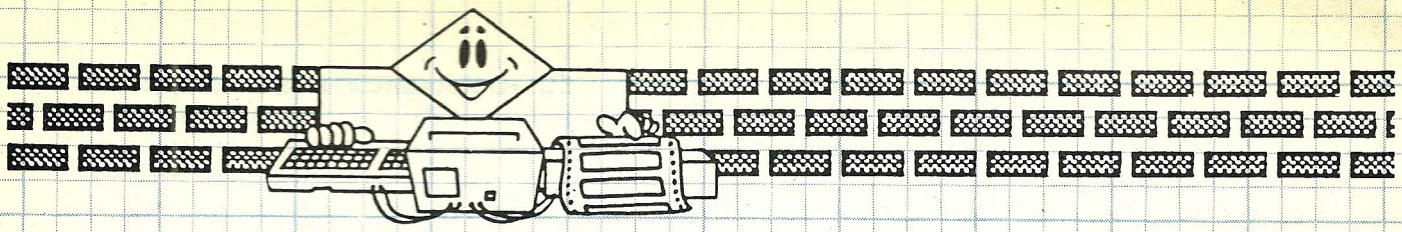
```
1230 GOTO 1820
1240 REM **** DATOS PRELIMINARES PARA 1 JUGADOR ****
1250 CLS:BEEP:LOCATE 1,10: LINE INPUT "NOMBRE DEL JUGADOR:";Q$:N$
="MSX-BORG"
1260 CLS:BEEP:LOCATE 0,7:PRINT"****ELIJA NIVEL DE JUEGO ****":LOC
ATE 0,9 :LINE INPUT"DE 4 A 8: ";R$
1270 R=VAL(R$)
1280 IF R<4 OR R>8 THEN 1260
1290 CLS:BEEP:LOCATE 0,10: LINE INPUT "A CUANTOS PUNTOS SERA EL F
IN DEL MACH ?";T$:T=VAL(T$)
1300 IF T<=0 OR T>25 THEN 1290
1310 REM *** INSTRUCCIONES 1 JUGADOR ***
1320 CLS:LOCATE 10,6:PRINTQ$
1330 LOCATE 3,10:PRINT"JUEGAS A LA IZQUIERDA"
1340 LOCATE 3,12:PRINT"TU RAQUETA ES LA NEGRA"
1350 LOCATE 3,14:PRINT"PARA MOVER LA RAQUETA"
1360 LOCATE 3,16:PRINT"UTILIZA EL CURSOR"
1370 FOR G=1 TO 4500:NEXT G
1380 FOR K=1 TO 25:PRINT:BEEP:NEXT K
1390 REM **** MOVIMIENTO RAQUETA 2 JUGADORES ****
1400 GOTO 920
1410 A$=INKEY$
1420 IF X1=-4 GOTO 1480
1430 IF A$="A" OR A$="a" THEN J=J-4:PRESET(J+4,K):PRESET(J+4,K-4)
:PRESET(J+4,K+4)
1440 IF A$="S" OR A$="s" THEN J=J+4:PRESET(J-4,K-4):PRESET(J-4,K)
:PRESET(J-4,K+4)
1450 IF A$="W" OR A$="w" THEN K=K-4:PRESET(J,K+8)
1460 IF A$="Z" OR A$="z" THEN K=K+4:PRESET(J,K-8)
1470 IF X1=4 GOTO 1530
1480 IF A$="P" OR A$="p" THEN L=L+4:PRESET(L-4,M-4):PRESET(L-4,M)
:PRESET(L-4,M+4)
1490 IF A$="O" OR A$="o" THEN L=L-4:PRESET(L+4,M-4):PRESET(L+4,M)
:PRESET(L+4,M+4)
1500 IF A$="L" OR A$="l" THEN M=M+4:PRESET(L,M-8)
1510 IF A$="O" THEN M=M-4:PRESET(L,M+8)
1520 REM **** LIMITES DE LAS RAQUETAS ****
1530 IF K<=6 THEN K=6
1540 IF K>=186 THEN K=186
1550 IF J<0 THEN J=0
1560 IF J>122 THEN J=122
1570 IF M<=6 THEN M=6
1580 IF M>=186 THEN M=186
1590 IF L>255 THEN L=255
1600 IF L<130 THEN L=130
1610 RETURN
1620 REM  **** MOVIMIENTO DE LA RAQUETA DE 1 JUGADOR *****
1630  D=STICK(0)
1640 IF D=7 THEN J=J-4:PRESET(J+4,K):PRESET(J+4,K-4):PRESET(J+4,K
+4)
1650 IF D=3 THEN J=J+4:PRESET(J-4,K-4):PRESET(J-4,K):PRESET(J-4,K
+4)
1660 IF D=1 THEN K=K-4:PRESET(J,K+8)
1670 IF D=5 THEN K=K+4:PRESET(J,K-8)
1680 REM **** LIMITES DE LA RAQUETA ****
1690 IF K<=6 THEN K=6
1700 IF K>=186 THEN K=186
```

```
1710 IF J<0 THEN J=0
1720 IF J>122 THEN J=122
1730 IF X1>0 THEN 1810
1740 REM **** MOVIMIENTO AUTOMATICO DE LA RAQUETA DE LA MAQUINA E
N LA MODALIDAD DE 1 JUGADOR ****
1750 IF Y1>0 AND  M<YI THEN M=M+R:PRESET(L,M-R-2):PRESET(L,M-R):P
RESET(L,M-R-5)
1760 IF Y1<0 AND M>YI THEN M=M-R:PRESET(L,M+R+2):PRESET(L,M+R):PR
ESET(L,M+R+5)
1770 IF XI<100 AND L>134 AND J<100 THEN L=L-4:PRESET(L+4,M-4):PRE
SET(L+4,M):PRESET(L+4,M+4)
1780 IF XI>L-4 AND L<248 AND YI<M AND YI>M-60 THEN L=L+4:PRESET(L
-4,M-4):PRESET(L-4,M):PRESET(L-4,M+4)
1790 IF XI>L-4 AND L<248 AND YI>M AND YI<M+60 THEN L=L+4:PRESET(L
-4,M-4):PRESET(L-4,M):PRESET(L-4,M+4)
1800 IF XI>110 AND L<236 AND J>100 THEN L=L+4:PRESET(L-4,M-4):PRE
SET(L-4,M):PRESET(L-4,M+4)
1810 RETURN
1820 LOCATE 0,20:PRINT"QUIERES JUGAR OTRA VEZ S/N "
1830 U$=INKEY$
1840 IF U$="N"THEN GOTO 1880
1850 IF U$="S"THEN A=0:B=0:GOTO 610
1860 IF U$<>"N"AND U$<>"S" THEN BEEP:T=0: GOTO 1820
1870 GOTO 1830
1880 END
```



BASE 7

```
5 LIST
10 SCREEN 1:KEY OFF
20 TABLA=BASE(7)
30 CARACTER$="W"
40 DIREC=TABLA+ASC(CARACTER$)*8
50 FOR X=DIREC TO DIREC+7
60 READ H
70 VPOKE X,H
80 NEXT
85 LOCATE 14,10:PRINT"W"
90 DATA 24,60,90,126,60,24,231,153
100 GOTO 100
110 '
120 '00 PRUEBA A SUSTITUIR00
130 '      LA LINEA 85 POR:
140 'VPOKE6480,ASC(CARACTER$)
150 'VERAS QUE HACE LO MISMO
```



LA GRUTA

```
10 ' 00000000000000000000000000000000
20 ' 00000                        00000
30 ' 00000        La Gruta        00000
40 ' 00000                        00000
60 ' 00000                        00000
70 ' 00000  Septiembre de 1986    00000
80 ' 00000                        00000
90 ' 00000000000000000000000000000000
100 '
110 '
120 '            PORTADA
130 '
140 COLOR 15,1,1:SCREEN 2,0,1
150 '                L
160 DRAW"s4C6BM15,72R3U1R2D1R2D6L1D7R1D6L1D4L1D1R1D1R1D1R6D1R4D3R
3D2L1D1L9D1L3U1L3U2L3U7L2U7R1U4R1U10L1U4R1"
170 PAINT(16,74),6
180 '                A
190 DRAW"C15BM45,104U2L1U9R1U5L2U8R1E1U2R1U3R5U4E1R4D1R3D3R2D3R2F
1D8R2D13L1D2L1D2L4D1L3U3E1U6R3U6L2H1U7L5D1L2D1L2D5L2R2D3L1D6R1D5R
1D2R1D2L5U1BM50,85R7D1BM50,88R3D1R1D1R8"
200 PAINT(47,101),15
210 PAINT(54,87),15
220 '                G
230 DRAW"bm114,72C10U1L2U2L8D1L5D4L1D3L1D7R1D7L1D4R1D2R2D7R3D1R7D
```

```
1R6U1R1U5L2U5H1u7L2u316d3r2D8L3U1L1U2L1U5L1U6L1U5R5U1R1U1R2U1R1r3
u1"
240 PAINT(106,74),10
250 '                R
260 DRAW"C5BM125,70D6R2D11L1D1G3D2F1R4D8G1D1R3D2R2D1R4H3U4R1U6L1U
4R2F6D3R1D2R1D4R3U2R1U4R2U3H4L2U2L2U1L1U3L3U1R1U1R2U1R4U3R1U1R1U3
R1U4L3H3L5U1L2U1L3U1L3G3R1BM133,72R3D2R3D3L1G1D1L1G1D1L3U1R1U2L1U
3R1U4R1"
270 PAINT(127,72),5
280 '                U
290 DRAW"C13BM155,72R3U1R2D1R2D6L1D7R1D6L1D4L1D1R1D1R1D1R2D1R4U3R
2U2E2U4H1U2R2H2U4R2U3H2E2R1E2R2F2D4G1D3F2D2G3D5F2D2G4D2L5D3L3G2U2
L5H2L2U2L2U5E1U3H3U2R2U6E2U2H3U2"
300 PAINT(157,73),13
310 '                T
320 DRAW"C3BM187,70R3E2R3D2R6E3R5F2R3D1R2F1D3G1D1G2H3L1G2L2G2D5F2
D4G3D5R2F1D6G3L2H2G1L1H1U4E1U5E2U3H2U2R2U4H2R2U4H2L3D2G1L3H2U2H2U
2"
330 PAINT(189,72),3
340 '                A
350 DRAW"C9BM223,104U2L1U9R1U5L2U8R1E1U2R1U3R5U4E1R4D1R3D3R2D3R2F
1D8R2D13L1D2L1D2L4D1L3U3E1U6R3U6L2H1U7L5D1L2D1L2D5L2R2D3L1D6R1D5R
1D2R1D2L5U1BM228,85R7D1BM228,88R3D1R1D1R8"
360 PAINT(225,101),9
370 PAINT(232,87),9
380 '
410  N=(N+1)MOD(15):VDP(7)=N:FOR I=1 TO 10 :NEXT
420 FF=FF+1:IF FF>227 THEN440
430 GOTO 410
440 '
450 COLOR 15,1,1:SCREEN1,2,0:KEY OFF:WIDTH 32
460 LOCATE 6,10:PRINT"UN MOMENTO POR FAVOR"
470 FOR K=1 TO 13:B$="":FORI=1TO 32 :READ A$:B$=B$+CHR$(VAL("&H"+
A$)):NEXT:SPRITE$ (K)=B$:NEXT
480 '
490 FOR I=2008 TO 2039:READ A$:VPOKE I,VAL("&h"+A$):NEXT
500 VPOKE 8192+31,&HF6
510 '
520 ' creacion de la pantalla
530 '
540 CLS
550 FOR I=6144 TO 6175 STEP 2:VPOKE I,251:VPOKE I+1,253:NEXT
560 FOR I=6176 TO 6206 STEP 2:VPOKE I,252:VPOKE I+1,254:NEXT
570 FOR I=6208 TO 6848 STEP64:VPOKE I,251:VPOKE I+1,253:NEXT
580 FOR I=6240 TO 6880 STEP64:VPOKE I,252:VPOKE I+1,254:NEXT
590 FOR I=6848 TO 6879 STEP2:VPOKE I,251:VPOKE I+1,253:NEXT
600 FOR I=6880 TO 6911 STEP2:VPOKE I,252:VPOKE I+1,254:NEXT
610 FOR I=6238 TO 6878 STEP64:VPOKE I,251:VPOKE I+1,253:NEXT
620 FOR I=6270 TO 6910 STEP64:VPOKE I,252:VPOKE I+1,254:NEXT
630 FOR I=6214 TO 6406 STEP64:VPOKE I,251:VPOKE I+1,253:NEXT
640 FOR I=6246 TO 6438 STEP64:VPOKE I,252:VPOKE I+1,254:NEXT
650 FOR I=6598 TO 6662 STEP64:VPOKE I,251:VPOKE I+1,253:NEXT
660 FOR I=6630 TO 6694 STEP64:VPOKE I,252:VPOKE I+1,254:NEXT
670 FOR I=6348 TO 6796 STEP64:VPOKE I,251:VPOKE I+1,253:NEXT
680 FOR I=6380 TO 6828 STEP64:VPOKE I,252:VPOKE I+1,254:NEXT
690 FOR I=6226 TO 6674 STEP64:VPOKE I,251:VPOKE I+1,253:NEXT
700 FOR I=6258 TO 6706 STEP64:VPOKE I.252:VPOKE I+1,254:NEXT
```

```
710 FOR I=6360 TO 6488 STEP64:VPOKE I,251:VPOKE I+1,253:NEXT
720 FOR I=6392 TO 6520 STEP64:VPOKE I,252:VPOKE I+1,254:NEXT
730 FOR I=6680 TO 6808 STEP64:VPOKE I,251:VPOKE I+1,253:NEXT
740 FOR I=6712 TO 6840 STEP64:VPOKE I,252:VPOKE I+1,254:NEXT
750 '
760 ' definicion de funciones
770 '
780 DEFFNC(X,Y)=((X+8)\8)+((Y\8)*32)+6144
790 DEFFNP(X,Y)=((X+8)\8)+(((Y+28)\8)*32)+6144
800 DEFFND(X,Y)=((X+16)\8)+(((Y+20)\8)*32)+6144
810 DEFFNI(X,Y)=(X\8)+(((Y+20)\8)*32)+6144
820 '
830 DEFFNM(MX,MY)=((MX+8)\8)+((MY\8)*32)+6144
840 DEFFNG(MX,MY)=((MX+8)\8)+(((MY+16)\8)*32)+6144
850 DEFFNH(MX,MY)=(MX\8)+(((MY+8)\8)*32)+6144
860 DEFFNT(MX,MY)=((MX+16)\8)+(((MY+8)\8)*32)+6144
870 '
880 DEFFNL(BX,BY)=((  X-2)\8)+(((BY+2)\8)*32)+6144
890 DEFFNR(BX,BY)=((2X+16)\8)+(((BY+2)\8)*32)+6144
900 '
910 ' inicializacion de variables
920 '
930 X=14:Y=80:PO=1:PA=6:PI=11:JJ=21
940 C1=7:C2=10:MX=222:MY=156:VI=5
950 UU=&HF6:QQ=&H56:WW=5:YY=15
960 SOUND 7,&B11000¹
970 '
980 STRIG(0) ON :ON     .G GOSUB 1460
990 '
1000 ' bucle principal
1010 '
1020 SC=FNC(X,Y):SP=FNP(X,Y)
1030 SD=FND(X,Y):SI=FNI(X,Y)
1040 GOSUB 1800
1050 GOSUB 120
1060 IF X+12>MX AND X<MX+12 AND Y+12>MY AND Y<MY+12 THEN GOSUB 21
10
1070 IF MA=0 THEN GOTO 1140
1080 BX=BX+CX:SU=SU+1.5
1090 SOUND 6,SU:SOUND 8,5
1100 BR=FNR(BX,BY):BL=FNL(BX,BY)
1110 IF CX>0 AND VPEEK(BR)<>32 OR CX<0 AND VPEEK(BL)<>32 THEN GOS
UB 1620
1120 GOSUB 1740
1130 IF BX+12>MX AND BX<MX+12 AND BY+12>MY AND BY<MY+12 THEN GOSU
B 2040
1140 SWAP C1,C2:SWAP UU,QQ:SWAP WW,YY
1150 VPOKE 8192+31,UU
1160 GOTO 1020
1170 '
1180 ' movimiento del hombre
1190 '
1200 D=STICK(CT)
1210 IF D=0 THEN GOTO 1260 ELSE JJ=21:PI=11:PA=6
1220 IF D=1 AND VPEEK(SC)=32 THEN Y=Y-4:GOTO1260
1230 IF D=3 AND VPEEK(SD)=32 AND VPEEK(SC)=32 AND VPEEK(SP)=32 TH
EN X=X+4:PO=1:GOTO 1260
```

```
1240 IF D=5 AND VPEEK(SP)=32 THEN Y=Y+4:GOTO 1260
1250 IF D=7 AND VPEEK(SI)=32 AND VPEEK(SC)=32 AND VPEEK(SP)=32 TH
EN X=X-4:PO=2
1260 ON PO GOSUB 1310,1380
1270 RETURN
1280 '
1290 'posturas del hombre
1300 '
1310 PUTSPRITE 3,(X,Y),10,3
1320 PUTSPRITE 4,(X,Y),8,4
1330 PUTSPRITE 5,(X,Y+8),12,5
1340 PUTSPRITE 6,(X+1,Y+JJ),8,PA
1350 RETURN
1360 '
1370 '
1380 PUTSPRITE 3,(X,Y),10,8
1390 PUTSPRITE 4,(X,Y),8,9
1400 PUTSPRITE 5,(X,Y+8),12,10
1410 PUTSPRITE 6,(X-1,Y+JJ),8,PI
1420 RETURN
1430 '
1440 ' patada
1450 '
1460 IF X<16 OR X>220 THEN RETURN
1470 IF PO=1 AND VPEEK(SD)<>32 AND VPEEK(SD+3)=32 THEN PA=7:CX=4:
BX=((X+16)\16)*16:GOSUB 1510
1480 IF PO=2 AND VPEEK(SI)<>32 THEN PI=12:CX=-4:BX=(X\16)*16:GOSU
B 1510
1490 RETURN
1500 '
1510 MA=1:JJ=17
1520 STRIG(0)OFF
1530 BY=(((Y+20)\16)*16)-1
1540 GOSUB 1740
1550 BR=FNR(BX,BY):BL=FNL(BX,BY)
1560 Y=Y-16
1570 ON PO GOSUB 1310,1380
1580 U1=32:U2=32:U3=32:U4=32
1590 GOSUB 1710
1600 RETURN
1610 '
1620 MA=0:JJ=21:PI=11:PA=6
1630 U1=251:U2=253:U3=252:U4=254
1640 IF Y<16 THEN Y=Y+16
1650 GOSUB 1710
1660 STRIG(0) ON
1670 SOUND 8,0:SU=0
1680 IF FG=1 THEN FG=0:MY=156:MX=222
1690 RETURN
1700 '
1710 VPOKE BL+1,U1:VPOKE BL+2,U2:VPOKE BL+33,U3:VPOKE BL+34,U4
1720 IF MA=0 THEN BY=209
1730 '
1740 PUTSPRITE 1,(BX,BY),WW,1
1750 PUTSPRITE 2,(BX,BY),6,2
1760 RETURN
1770 '
```

```
1780 'movimiento del monstruo
1790 '
1800 CM=FNM(MX,MY):PM=FNG(MX,MY)
1810 IM=FNH(MX,MY):DM=FNT(MX,MY)
1820 IF VE>4 OR VPEEK(CM)<>32 OR VPEEK(PM)<>32 THEN VE=0:TI=0:TD=
0:FU=0
1830 IF TI=1 AND VPEEK(IM)=32 OR TD=1 AND VPEEK(DM)=32 THEN VE=VE
+1
1840 IF FU=1 THEN MY=MY+(DD*4):GOTO 1940
1850 IF RA=1 AND MX=X THEN RA=2
1860 IF RA=2 AND MY=Y OR RA=2 AND VPEEK(PM)<>32 THEN RA=1
1870 ON RA GOTO 1880,1900
1880 IF MX>X AND VPEEK(IM)=32 THEN MX=MX-4:GOTO 1940
1890 IF MX<X AND VPEEK(DM)=32 THEN MX=MX+4:GOTO 1940
1900 IF MY>Y AND VPEEK(CM)=32 THEN MY=MY-4:GOTO 1940
1910 IF MY<Y AND VPEEK(PM)=32 THEN MY=MY+4
1920 '
1930 'choque del monstruo con paredes
1940 '
1950 IF MY=Y AND VPEEK(IM)<>32 THEN TI=1: GOSUB 2000
1960 IF MY=Y AND VPEEK(DM)<>32 THEN TD=1:GOSUB 2000
1970 PUTSPRITE 13,(MX,MY),C1,13
1980 RETURN
1990 '
2000 FU=1:DD=INT(RND(1)*3)-1:IF DD=0 THEN 2000 ELSE RETURN
2010 '
2020 ' monstruo eliminado
2030 '
2040 TN=TN+50:FG=1
2050 SOUND 2,30:SOUND 9,16:SOUND 13,15:SOUND 12,15
2060 MY=209
2070 RETURN
2080 '
2090 ' muertes
2100 '
2110 VI=VI-1
2120 SOUND 9,16:SOUND 2,100:SOUND 13,14:SOUND 12,5
2130 MY=156:MX=222:X=14:Y=80
2140 FOR I=1 TO 1000:NEXT
2150 SOUND 7,&B111111:SOUND 9,0
2160 SOUND 7,&B110001
2170 IF VI=0 THEN 2220
2180 RETURN
2190 '
2200 ' FIN DE PARTIDA
2210 '
2220 SCREEN 0:LOCATE 2,8:PRINT"LO SIENTO TUS VIDAS HAN ACABADO"
2230 LOCATE 5,15:PRINT"PUNTOS CONSEGUIDOS=";TN
2240 LOCATE 1,20:PRINT"LO INTENTAS DE NUEVO SI O NO [S/N]"
2250 X$=INKEY$
2260 IF X$="S"OR X$="s" THEN RUN
2270 IF X$="n"OR X$="N" THEN SCREEN 0:END
2280 GOTO 2250
2290 '
2300 ' datos de los sprites
2310 '
2320 ' sprites ladrillo
```

```
2330 '
2340 DATA 7F,FF,FF,F0,E0,E0,E0,E0,E0,E0,E0,E0,F0,FF,FF,7F,FE,FF,F
F,F,7,7,7,7,7,7,7,7,F,FF,FF,FE,0,0,0,F,3F,3F,3F,3F,3F,3F,3F,3F,F,
0,0,0,0,0,0,Fc,fc,Fc,Fc,Fc,Fc,Fc,Fc,Fc,Fc,0,0,0
2350 '
2360 ' pelo --->
2370 '
2380 DATA 1,3,7,6,6,6,0,0,0,0,0,0,0,0,0,0,80,E0,F0,80,80,0,0,0,0,
0,0,0,0,0,0,0
2390 ' cara y brazo --->
2400 '
2410 DATA 0,0,1,1,1,3,3,1,0,1,1,1,1,1,1,0,0,0,60,60,F0,E0,C0,80,0
,80,80,80,80,F6,F6,0
2420 '
2430 ' cuerpo --->
2440 '
2450 '
2460 DATA 2,3,6,7,5,6,7,6,7,5,6,7,7,2,0,0,60,F0,B8,68,D8,F8,A8,F8
,E8,B8,E8,F8,D8,98,10,0,0
2470 '
2480 ' piernas andando --->
2490 '
2500 DATA 6,6,6,7,7,0,0,0,0,0,0,0,0,0,0,0,30,30,30,38,BC,0,0,0,0,
0,0,0,0,0,0
2510 ' piernas patada --->
2520 '
2530 DATA 0,0,0,0,0,6,6,6,7,7,0,0,0,0,0,0,1,1,3,3F,7F,0,0,0,0,80,
0,0,0,0,0,0
2540 ' pelo <---
2550 '
2560 DATA 1,7,F,1,1,0,0,0,0,0,0,0,0,0,0,0,80,C0,E0,60,60,60,0,0,0
,0,0,0,0,0,0,0
2570 '
2580 ' cara y brazo <----
2590 '
2600 DATA 0,0,6,6,F,7,3,1,0,1,1,1,1,6F,6F,0,0,0,80,80,80,C0,C0,80
,0,80,80,80,80,80,80,0
2610 '
2620 ' cuerpo <----
2630 '
2640 DATA 6,F,1D,16,1B,1F,15,1F,17,1D,17,1F,1B,19,8,0,40,C0,60,E0
,A0,60,E0,60,E0,A0,60,E0,E0,40,0,0
2650 '
2660 ' piernas andando <----
2670 '
2680 DATA 0,C,C,C,1C,3D,0,0,0,0,0,0,0,0,0,0,0,0,60,60,60,E0,E0,0,0,
0,0,0,0,0,0,0,0
2690 '
2700 ' piernas patada <----
2710 '
2720 DATA 80,80,C0,FC,FE,0,0,0,0,1,0,0,0,0,0,0,0,0,0,0,0,0,60,60,60
,E0,E0,0,0,0,0,0,0
2730 '
2740 ' monstruo
2750 '
2760 DATA49,47,2F,19,B9,7F,7F,7A,32,58,89,1D,2F,45,44,CC,92,E2,F4
,98,9D,FE,FE,5E,4C,1A,91,B8,F4,A2,22,33
```

```
2770 '
2780 ' datos caracteres
2790 '
2800 DATA7F,FF,FF,F0,E0,E0,E0,E0,E0,E0,E0,E0,F0,FF,FF,7F,FE,FF,FF
,F,7,7,7,7,7,7,7,7,F,FF,FF,FE
```

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